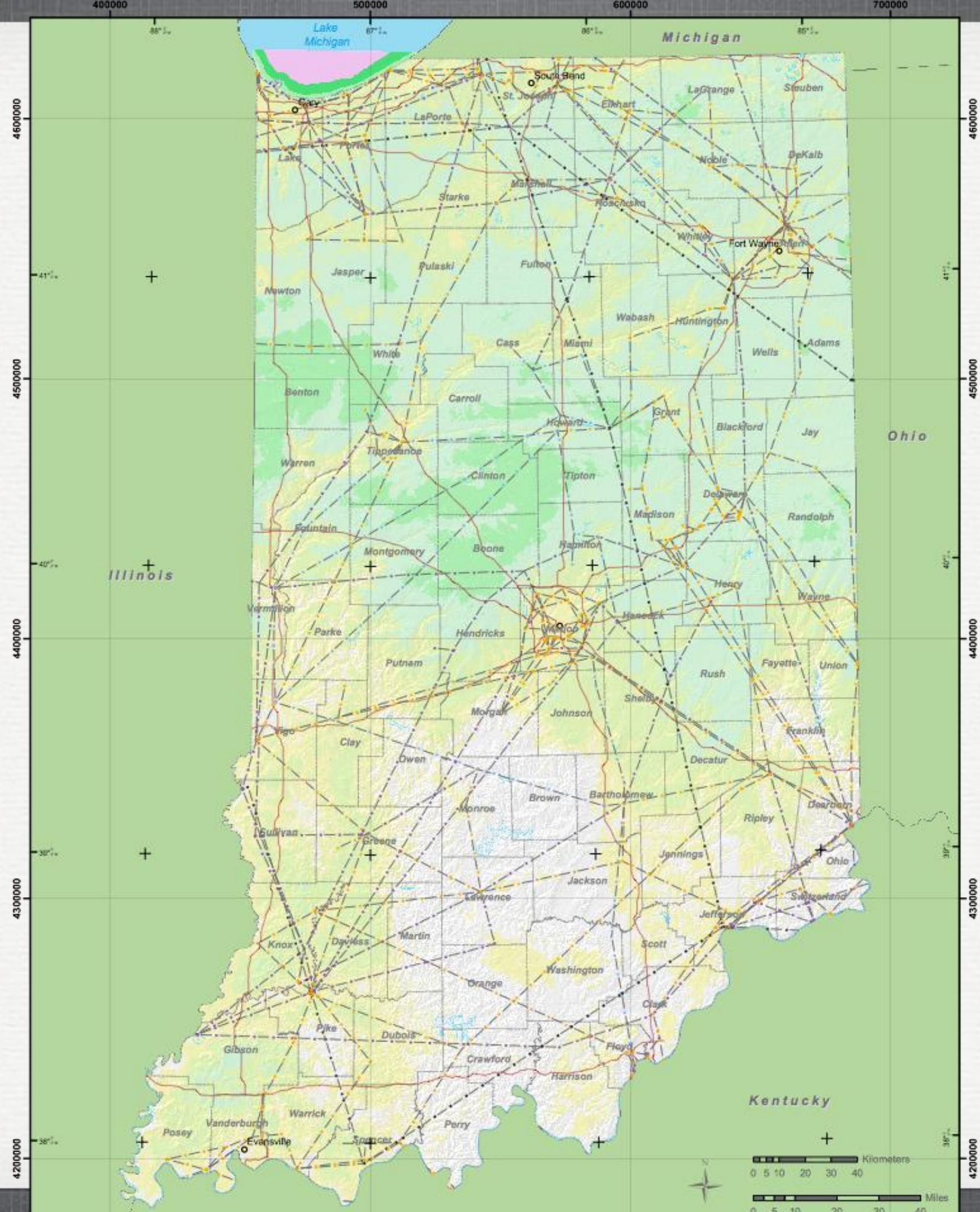


Small Wind checklist

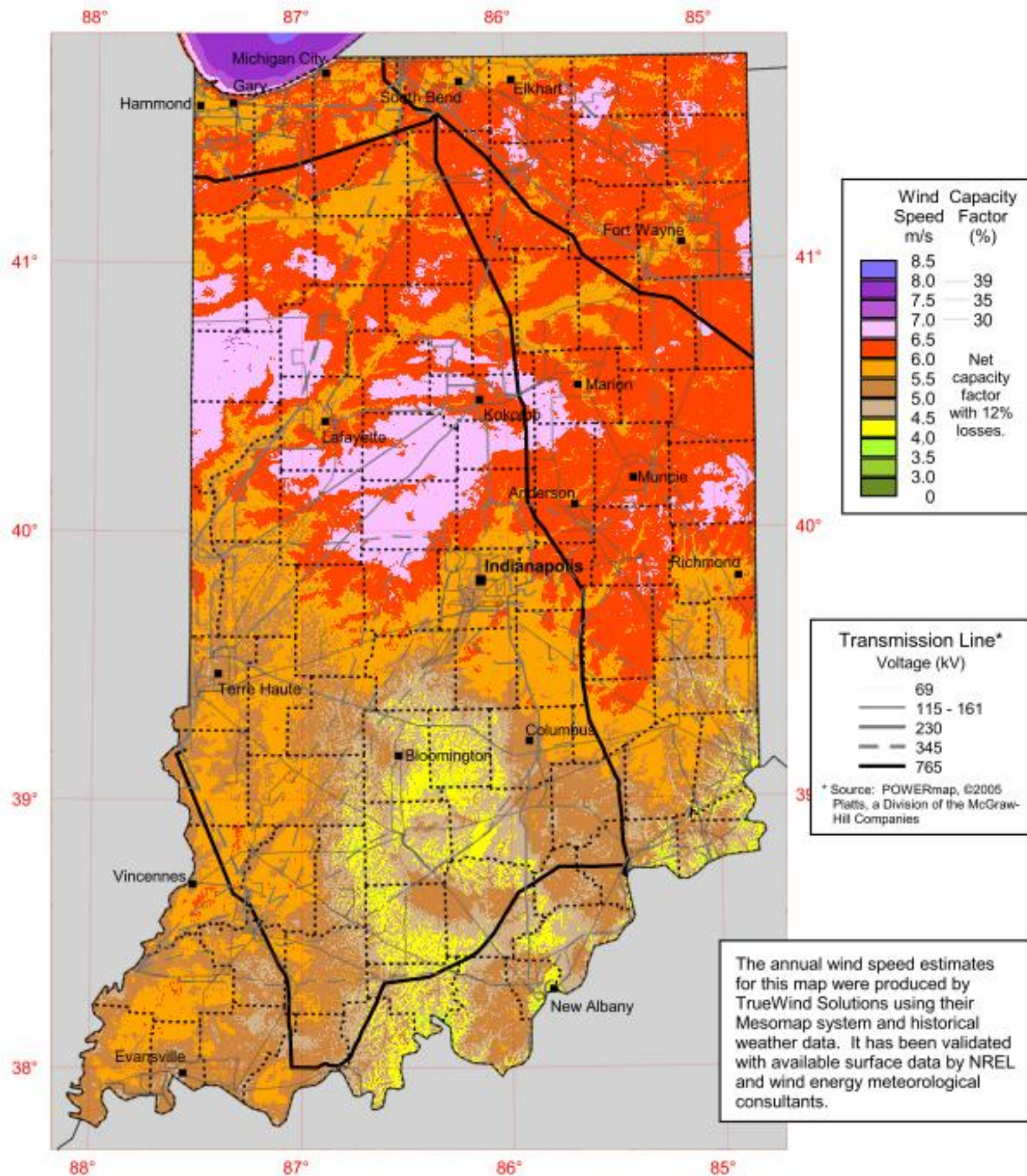
- Site Assessment
- Utility Connection
- Zoning requirements

Small Wind Checklist

- Site Assessment
 - Wind Speed
 - Wind Blocks
 - 50 ft. taller than everything within 250 ft.
 - Turbulence



Indiana - 50 m Wind Speed



Small Wind Checklist

- Utility Connection
 - Interconnection agreement
 - Net Metering?
 - Net Billing?
 - Sorry, you are on your own
 - An AC Disconnect and possibly a Turbine Disconnect required, usually outside.

Small Wind Checklist

- Zoning Requirements
 - Height restrictions
 - Required distance from property lines
 - Permits
 - Inspections
- Talk to your neighbors

Small Wind Checklist

- Load Requirements
 - 240V, 208V
 - Grid-tied, Grid-interactive, Stand alone
 - kWh/year
 - What percentage of annual electricity?

Small Wind Checklist

- Pick a Size
 - Avg. Wind Speed
 - AEP - Average energy production
 - $\text{kWh} = 0.01328(D)^2(V)^3$
 - Check Manufacturer Graphs

Small Wind Checklist

- Geotechnical Survey
 - Anywhere from digging down with a shovel to a professional analysis.
 - This will determine how far down the foundation will be dug.
 - The results could narrow the choice of tower

Small Wind Checklist

- Pick a Tower Type
 - Free Standing Monopole
 - Guyed Monopole
 - Free Standing Lattice
 - Guyed Lattice
- Pick a Turbine





Small Wind Checklist

- Foundation
 - Dig, rebar, bolts, pour, wait
 - How long do you wait? As long as it says.
 - $\pi r^2 \cdot h$, $l \cdot w \cdot h$
 - 1 cu. yard = 27 cu. ft. = 46,656 cu. in.



Small Wind Checklist

- Wire
 - Trenching
 - Conduit
 - Amperage
 - Voltage Drop
 - Wire Size

Small Wind Checklist

- Construct tower, if necessary
- Attach turbine to tower
- Raise the tower/turbine into place
- Final Connections